Santa Rosa Island Research Station
California State University Channel Islands
2018-19 Annual Report
A. SRIRS User Days & Partners

1. 2018-19 User Days

<table>
<thead>
<tr>
<th>User Group</th>
<th>User Days</th>
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</thead>
<tbody>
<tr>
<td>CSUCI Students</td>
<td>1,207</td>
</tr>
<tr>
<td>CSUCI Faculty/Staff</td>
<td>379</td>
</tr>
<tr>
<td>Non-CSUCI Students</td>
<td>758</td>
</tr>
<tr>
<td>Outside Researchers</td>
<td>270</td>
</tr>
<tr>
<td>Other Partners</td>
<td>343</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>2,957</strong></td>
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</tbody>
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2. CSUCI Academic Programs (23): Anthropology, Applied Physics, Art, Biology, Chicana/o Studies, Communications, Computer Science, Early Childhood Studies, ESRM, History, Library Sciences, Mathematics, Nursing, Performing Arts, Political Science, Psychology, CSUCI Presidential Scholars, Project OLAS, School of Education, Sociology, Spanish, Student Academic Success & Equity Initiatives, and University Studies. (comprised 54% of all visitors)

3. Outside Organizations:
   a. Academic (25): Cabrillo Community College, Cal Poly San Luis Obispo, Cate School, Colorado State University, Cornell University, CSU Monterey Bay, San Diego State University, CSU STAR Program, Los Angeles Unified SD – Reseda High School, Oxnard SD – RJ Frank Middle School, Pepperdine University, Santa Barbara Unified SD, Santa Paula Unified SD – Isbell Middle School, Seattle Central College, Thomas Jefferson University, Westmont College, University of Colorado – School of Medicine, Santa Barbara City College, UC Davis, UCLA, UC San Diego, UC Santa Barbara, University of Michigan, University of Oregon, and Ventura Unified SD - Foothill Technology High School.

B. SRIRS Student Research

1. Student Capstone/Independent Research Projects
   a. Anthropology (2 Students)
      - Inclusive Interpretation of SRI Cultural Resources: Balancing Visibility, Education and Protection: Creating Cultural Resource Educational Tools for the Santa Rosa Island Research Station (CI Faculty Mentors: Jennie Luna, Jaime Matera, Jennifer Perry; NPS Collaborator: Kristen Hoppa; SRIRS Staff: Russ Bradley, Robyn Shea, Aspen Coty.)
      - Exploration of Chumash Phenomenology and Ethnobotany: How the Land, Plants and Animals Teach Humans How to Live in Harmony within the Ecosystem and to Communicate Knowledge (CI Faculty Mentors: Jaime Matera, Jennifer Perry; NPS Collaborator: Kristen Hoppa; SRIRS Staff: Russ Bradley.)
   b. Biology (5 Students)
      - Intertidal Ecology: Continued long term monitoring of intertidal species and ocean conditions at Becher’s Bay and Skunk Point Sites. This work supplements and expands upon the Channel Islands National Park long-term monitoring program (CI Faculty Mentor: Geoff Dilly; NPS Collaborator: Steve Whittaker.)
   c. ESRM (12 Students)
      - Big Tree Demography (5 Students): Santa Rosa Island Torrey Pines (Pinus torreyana) demography and production following removal of non-native deer and elk. (Faculty Mentor: Sean Anderson; USGS Collaborator: Kathryn McEachern; SRIRS Staff: Russ Bradley, Robyn Shea).
      - Micro-plastics (1 Student): Micro-plastic Fallout from Air and Rainwater (CI Faculty Mentor: Clare Steele; SRIRS Staff: Michaela Miller, Russ Bradley, Robyn Shea)
      - ROV Monitoring (4 Students): Effectiveness of Marine ROVs to assess Marine Resources (Faculty Advisor: Sean Anderson; SRIRS Staff: Russ Bradley and Robyn Shea).
- **Historic Photo-point Monitoring on Santa Rosa Island (1 Student):** Monitoring vegetation change using a citizen science project (CI Faculty Mentors: Kiki Patsch, Sean Anderson; SRIRS Staff: Russ Bradley).
- **Lagoon Monitoring - (1 Student):** Monitoring fluctuations of size and salinity over time of the Santa Rosa Island, East End Lagoons. (NPS Collaborator: Stephen Whittaker; CI Faculty Advisor: Sean Anderson; SRIRS Staff: Aspen Coty).

  d. **Art – Ceramic Mural and Kitchenware (3 Students):** Interpretive Representation of Island Landscape and Cultural Resources. (CI Faculty Mentors: Matthew Furmanski, Marianne McGrath, Jennifer Perry; SRIRS Staff: Russ Bradley, Robyn Shea, Aspen Coty).

  e. **Computer Science - Research Station Sustainability Platform Upgrades – (2 students):** Tracking research station research use through remote sensors (CI Faculty Mentor: Greg Wood; SRIRS Staff: Russ Bradley, Robyn Shea, Aspen Coty).

C. Faculty Research Projects

1. **Biology**
   a. **Geoff Dilly:** Investigating the impacts of climate change (i.e. sea level rise, ocean acidification, etc.) on the intertidal and sub-tidal habitats of Santa Rosa Island (NPS Collaborator: Steve Whittaker).

2. **Anthropology/Sociology**
   a. **Jaime Matera:** Community Perceptions, Understandings, and Future Expectations of the Santa Rosa Island Research Station

3. **Early Childhood Studies**
   a. **Annie White:** Creating and Supporting Reciprocal Family and Community Networks – 4 year study. (CI Faculty Collaborators: Heather Castillo, Jasmine Delgado, Bonnie Lavin, Marianne McGrath).

4. **Math**
   a. **Jason Miller:** Preliminary Acoustic Survey of the Microbats of Santa Rosa Island

D. Additional Research Supported by SRIRS

1. **Westmont College:** Examining the herpetology ecology & evolution on Santa Rosa Island.

2. **Colorado State University/Cornell/Smithsonian**
   a. Investigating song-sparrow population structure and adaptive radiations. – Colorado State University.
   b. Avian Genoscapes. - Colorado State University.
   c. Song Sparrow song variation – Cornell University.

3. **Santa Barbara Botanical Garden:** Ecological Network Collaboration – Santa Rosa Island; Native plant identification and seed preservation/collection; Terrestrial Invertebrate Survey on San Clemente Island.

4. **USGS:** Big Tree Demography (Torrey pines); Developing a restoration monitoring project within an ecological interaction network framework to guide the ecosystem recovery process on Santa Rosa Island (NPS Collaborator: Ken Convery; USGS Collaborator: Kathryn McEachern; SB Botanical Garden: Denise Knapp).

5. **USGS and CSU STEM Education Program:** STEM Teacher and Researcher Program (STAR), Summer Research Opportunities for STEM Educators (USGS Collaborator: Kathryn McEachern).

6. **Coastal Marine Biolabs:** Obtaining the unique DNA sequences of island arthropods and publishing the results within an international DNA Barcode database. (Collaborative with Reseda High School and Foothill Technology High School.)

7. **National Park Service - Inventory & Monitoring Program, Mediterranean Coast Network:** Historic Photo-Point Monitoring; Sandy Beach Monitoring; Vegetation Monitoring; Lagoon Monitoring.

8. **NOAA, Channel Islands National Park, The Nature Conservancy, Island Packers Company, University of California Natural Reserve System:** Cultivating Santa Barbara Channel Stewards – Community-Based Marine Debris Removal.


10. **UCSD:** Examining the phenotypic and genetic difference of ant species across the California Channel Islands.

11. **University of Colorado:** Wilderness First Responder training for Pre-Med Students.

12. **Islands of the California’s Botanical Collaborative Workshop:** Re-introductions and Translocations – Isla Guadalupe, Mexico June 14-18, 2019.